WO 2005/003620 PCT/FI2004/000393

7

## **CLAIMS**

- 1. An arrangement in connection with a central lubrication system. the arrangement comprising a lubricant vessel, a pump unit, a control unit, pipe systems, a pressure monitor unit, at least one feeder provided with at least one piston (5) which moves due to the influence of the pressure of a lubricant present in the pipe system/object to be lubricated, a movement monitor unit for each feeder in order to monitor the operation of the system, the lubricant being arranged to be pumped from the lubricant vessel along the pipe systems to the feeders and further to the objects to be lubricated, and a junction part (4) located in the movement monitor unit outside a pressurized space, characterized in that the junction part (4) is manufactured from a weakly magnetable material and it comprises a sensor part (3) which, in turn, comprises a fixed permanent magnet (2) in order to generate a magnetic field, and a sensor (1) for detecting movement of the magnetable piston (5), and an electronics part (13) which processes a signal received from the sensor and produced as a result of a change in the magnetic field caused by the movement of the piston (5) with respect to the sensor part (3), and forwards this processed signal to the control unit.
- 2. An arrangement as claimed in claim 1, characterized in that the sensor (1) is a Hall sensor.
- 3. An arrangement as claimed in claim 2, **characterized** in that the sensor (1) is an analogue Hall sensor.
- 4. An arrangement as claimed in claim 2 or 3, characterized in that output (9) of the movement monitor unit is locking so that a detection mode of the piston remains in a memory.
- 5. An arrangement as claimed in claim 4, **characterized** in that the locked detection mode of the output (9) of the movement monitor unit is releasable by cutting an operating voltage of the sensor (1) for a predetermined time.
- 6. An arrangement as claimed in any one of claims 1 to 5, **c h a r - a c t e r i z e d** in that the movement monitor unit is in its entirety located outside a pressurized space of the feeder.
- 7. An arrangement as claimed in any one of claims 1 to 6, **c h a r - a c t e r i z e d** in that the electronics part (13) comprises a voltage regulator (6), a detector (7) for detecting polarity of voltage, a microcontroller (8), an out-

WO 2005/003620 PCT/FI2004/000393

8

put circuit (9), indicator LEDs (10) as well as an amplifier part comprising a differential amplifier circuit (11) and low-pass filters (12).

- 8. An arrangement as claimed in claim 7, **characterized** in that the output circuit (9) is a potential-free relay contact.
- 9. An arrangement as claimed in any one of claims 1 to 8, **c h a r a c t e r i z e d** in that the plurality of movement monitor units of the central lubrication system are coupled in series.